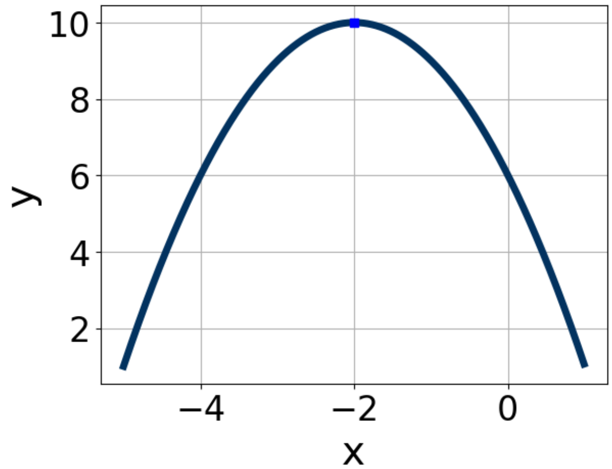
1. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [-2, -0.8], \quad b \in [1, 6], \text{ and } \quad c \in [-14, -10]$

B. $a \in [-2, -0.8], \quad b \in [-5, -3], \text{ and } \quad c \in [5, 9]$

C. $a \in [-2, -0.8], \quad b \in [1, 6], \text{ and } \quad c \in [5, 9]$

D. $a \in [-0.3, 1.8], \quad b \in [-5, -3], \text{ and } \quad c \in [11, 15]$

E. $a \in [-0.3, 1.8], \quad b \in [1, 6], \text{ and } \quad c \in [11, 15]$

---

2. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$54x^2 - 57x + 10$$

A. $a \in [1.9, 3.1], \quad b \in [-6, -1], \quad c \in [25.3, 27.05], \text{ and } \quad d \in [-7, 4]$

B. $a \in [4.5, 6.5], \quad b \in [-6, -1], \quad c \in [7.67, 10.95], \text{ and } \quad d \in [-7, 4]$

C. $a \in [0.8, 1.2], \quad b \in [-48, -41], \quad c \in [0.42, 1.12], \text{ and } \quad d \in [-18, -8]$

D. $a \in [16.8, 19.6], \quad b \in [-6, -1], \quad c \in [2.05, 3.54], \text{ and } \quad d \in [-7, 4]$

E. None of the above.

---

3. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$10x^2 - 53x + 36 = 0$$

A. $x_1 \in [0.18, 0.29]$ and $x_2 \in [12.91, 13.59]$

B. $x_1 \in [0.58, 0.86]$ and $x_2 \in [4.23, 4.93]$

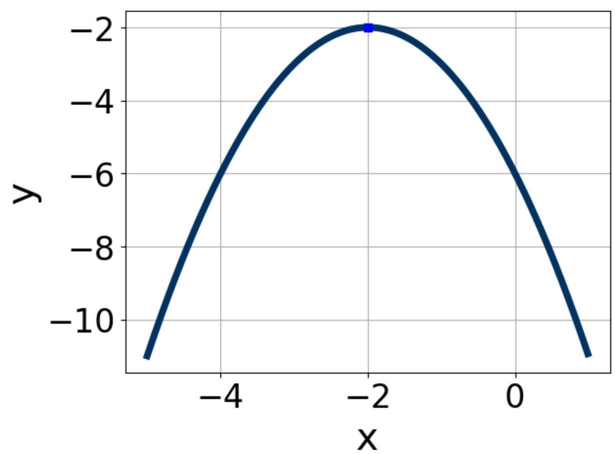
C. $x_1 \in [7.8, 8.15]$ and $x_2 \in [44.43, 45.75]$

D. $x_1 \in [0.85, 1.09]$ and $x_2 \in [3.99, 4.38]$

E. $x_1 \in [1.49, 1.94]$ and $x_2 \in [2.18, 2.4]$

---

4. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [-1.8, -0.5], \quad b \in [4, 5], \text{ and } \quad c \in [-4, -1]$

B. $a \in [0.6, 2.4], \quad b \in [4, 5], \text{ and } \quad c \in [-1, 3]$

C. $a \in [0.6, 2.4], \quad b \in [-7, 1], \text{ and } \quad c \in [-1, 3]$

D. $a \in [-1.8, -0.5], \quad b \in [4, 5], \text{ and } \quad c \in [-6, -4]$

E. $a \in [-1.8, -0.5], \quad b \in [-7, 1], \text{ and } \quad c \in [-6, -4]$

---

5. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$19x^2 - 13x - 8 = 0$$

A. $x_1 \in [-1.16, -1]$ and $x_2 \in [0.32, 0.93]$

B. $x_1 \in [-0.86, 0.52]$ and $x_2 \in [0.53, 1.65]$

C. $x_1 \in [-8.02, -7.19]$ and $x_2 \in [20.31, 20.63]$

D. $x_1 \in [-27.65, -26.74]$ and $x_2 \in [27.96, 28.45]$

E. There are no Real solutions.

---

6. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$36x^2 + 60x + 25$$

A. $a \in [1.41, 3.78], \quad b \in [5, 9], \quad c \in [10.94, 13.08], \text{ and } \quad d \in [4, 14]$

B. $a \in [17.03, 18.26], \quad b \in [5, 9], \quad c \in [1.93, 2.21], \text{ and } \quad d \in [4, 14]$

C. $a \in [4.42, 6.01], \quad b \in [5, 9], \quad c \in [5.68, 7.39], \text{ and } \quad d \in [4, 14]$

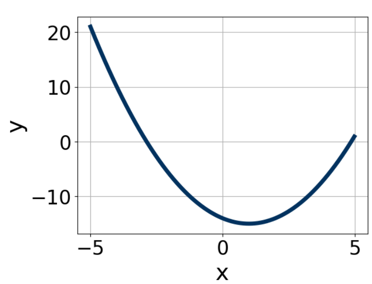
D. $a \in [0.67, 1.6], \quad b \in [26, 37], \quad c \in [0.92, 1.75], \text{ and } \quad d \in [29, 31]$

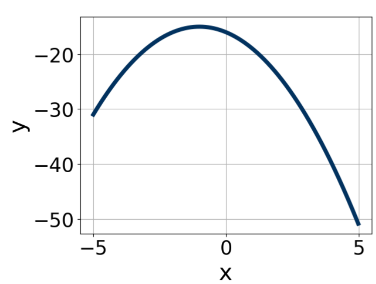
E. None of the above.

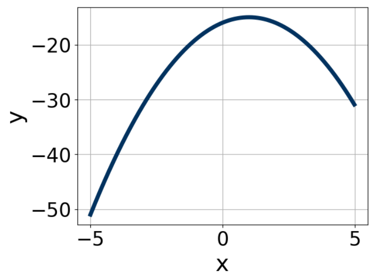
---

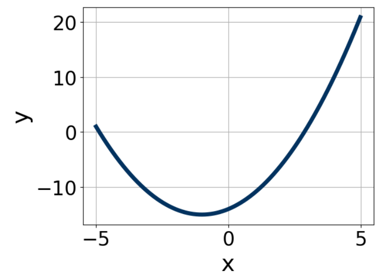
7. Graph the equation below.

$$f(x) = -(x + 1)^2 - 15$$

A. 

B. 

C. 

D. 

E. None of the above.

---

8. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$10x^2 + 12x - 5 = 0$$

A. $x_1 \in [-20.1, -17.9]$ and $x_2 \in [16.1, 18.4]$

B. $x_1 \in [-0.5, 1.9]$ and $x_2 \in [1.5, 2.7]$

C. $x_1 \in [-17.2, -15.1]$ and $x_2 \in [2.7, 5.6]$

D. $x_1 \in [-1.9, -0.4]$ and $x_2 \in [-0.6, 0.7]$

E. There are no Real solutions.

---

9. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$15x^2 + 8x - 16 = 0$$

A. $x_1 \in [-1.78, -0.94]$ and $x_2 \in [0.7, 1.03]$

B. $x_1 \in [-4.45, -3.43]$ and $x_2 \in [0.25, 0.36]$

C. $x_1 \in [-0.71, 0.61]$ and $x_2 \in [1.41, 1.67]$

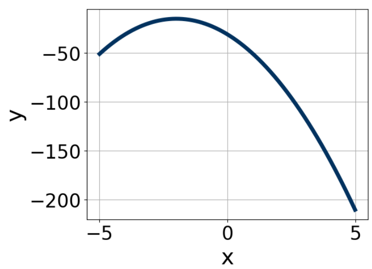
D. $x_1 \in [-20.84, -18.76]$ and $x_2 \in [11.92, 12.11]$

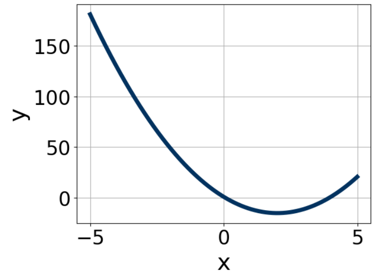
E. $x_1 \in [-2.91, -1.6]$ and $x_2 \in [0.36, 0.47]$

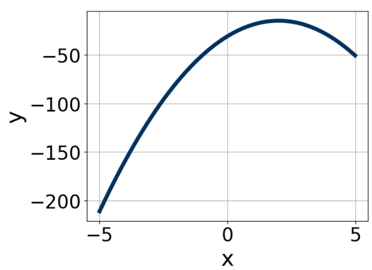
---

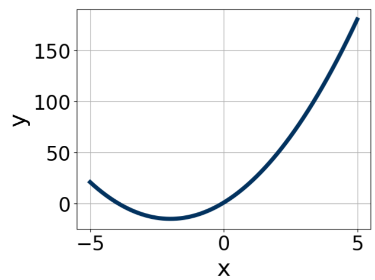
10. Graph the equation below.

$$f(x) = (x+2)^2 - 15$$

A. 

C. 

B. 

D. 

E. None of the above.